

REMARKS-General

1. The newly drafted independent claims 21 and 35 claim methods of manufacturing a golf ball previously brought forth in the disclosure. No new matter has been included. All new claims 21 to 40 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Response to Rejection of Claims 1 to 20 under 35USC112

2. The Examiner appears to reason that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which it is most nearly connected, to make and/or use the invention, such as how are the first and second bodies produced and how are the two eight sections forming the cover produced, the claims 1-20 fail to comply with the enablement requirement.

3. Pursuant to 35USC112, first paragraph, "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to **enable any person skilled in the art** to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

4. The applicant respectfully submits that the main objective of the instant invention is not to provide a new kind of core or cover for golf ball or a new way of connecting the core pieces and/or cover pieces together. The main objective of the instant invention is to provide two identical joint portion of two hemispheric cups that can be united together to form the ball cover with minimum friction between the contacting surfaces and minimized stress occurred at the connecting joint portions. Another objective of the instant invention is to provide a solid ball core constructed by two symmetrical pieces while minimizing the friction between all contacting surfaces and the stress of all connecting portion during rotation and impact.

5. As described in the specification of the instant invention, page 6, line 25, the solid ball core C can be a conventional ball core, and in page 9, line 21, the ball cover can be a conventional ball cover. The applicant respectfully submits that the main features of the claimed invention of claims 1 to 20 include: (i) the shape of the first and second identical hemispheric cups each having a continuous joint edge for attaching edge to edge to form a hollow spheroid wherein the friction between the two continuous joint edges is minimized; and (ii) the shape of the first and second symmetrical core bodies each having a joint portion having a continuous joint surface for attaching face to face to form a spheroid wherein the friction between the two joint surfaces is minimized. In which, the core body and the ball cover can be made of any conventional materials and the way of integrally attaching the edges of two ball cover cups together or integrally attaching the two symmetrical core bodies together to form a ball cover or a solid ball core can be any conventional method, such as but not limited to what is disclosed in US patents 5,779,564, 6,312,346, 6,048,279, 6,039,910, 5,618,898, and etc..

6. As described in the specification of the instant invention, the conventional two pieces of cover cup or ball core are merely constructed as shown in Fig. 1 that the connection seam forms an uneven roundness of the golf ball. In other words, no matter what kinds of conventional material is used to make the ball core bodies or cover cups and whatever conventional method is used to attach the core bodies or cover cups together, as long as the core bodies and cover cups are symmetrically constructed as the shape and structure as disclosed and claimed in the instant invention, the relative frictions between the attaching edges of the cover cups and the engaging surfaces of the core bodies are reduced than the prior art.

7. To person skilled in the art of golf ball manufacturing, it is a known art of how to make the core bodies and the cover cups as well as how to mold the core bodies and the cover cups, and therefore there is no need to repeat such conventional art of making and attaching the cover cups or core bodies in the shape and structure as claimed in the instant invention. Accordingly, applicants believe that the rejection of claim 1 to 20 under 35USC112, first paragraph, is improper and should be withdrawn.

Response to Rejection of Claims 1 to 20 under 35USC103

8. The Examiner appears to reason that since Nakamura teaches a golf ball comprising a core and a dimpled cover, it would have been obvious to one skilled in the art to modify Nakamura with the teaching of the method of making a game ball using eight shaped pieces in Pitsenberger, so that the Examiner rejected claims 1 to 20 over Nakamura in view of Pitsenberger.

9. The Examiner further alleges that the final product or golf ball produced appears to be no different from what is disclosed in the primary reference, Najamura, so that if the method of production such as the eight-shaped pieces produces a patentably distinct golf ball applicant is encouraged to claim the structural differences of the final product and not the differences in the method of productions.

10. The applicant respectfully submits that when two circular edges of the conventional cover cups and two circular surfaces of the ball cores of a two-piece solid golf ball are attached together, as shown in Fig. 1, they will not like an integral body molded in one piece. Such flat connecting surfaces weaken the structure due to the friction and twisting stress therebetween and thus affect the distance and flying trajectory of the golf ball.

11. Nakamura merely suggests a conventional single-piece solid core golf ball without any mention of any conventional two-piece solid golf ball. On the other hand, Pitsenberger just discloses a base ball that fails to suggest any relationship with golf ball and anyway to incorporate such disclosed technology into a golf ball. Accordingly, these patents fail to suggest the invention of claims 1 to 40, wherein the main features of the instant invention is to provide a novel joint edge structure for cover cups and a novel joint portion structure for ball core bodies so as to better integrally attached together that eliminates friction between the attaching joint edges or joint surfaces.

12. The applicant respectfully submits that throughout the disclosure and claims of the instant invention, the applicant does not mention any "**eight-shape configuration**".

13. The Examiner should not simplify the structural limitation of the claims of the instant invention to a simple description, i.e. the **eight-shape sections and configuration**, and alleges that it would be obvious to modify a conventional single

piece golf ball with a base ball to achieve what is claimed in the instant invention. This is clearly **not** a proper basis for combining references in making out an obviousness rejection of the present claims. Rather, the invention must be considered as a whole and there must be something in the reference that suggests the combination or the modification. See Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984) ("The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination"), In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984), ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.") In re Laskowski, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

14. In the present case, there is no such suggestion. Nakamura and Pitsenberger perform very different types of products, wherein Nakamura merely describes a conventional single piece solid golf ball and Pitsenberger merely discloses a base ball.

15. In any case, even combining Nakamura and Pitsenberger would not provide the invention as claimed -- a clear indicia of nonobviousness. Ex parte Schwartz, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992), ("Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed."). Applicant believes that neither Nakamura nor Pitsenberger, separately or in combination, suggest or make any mention whatsoever of the following distinctive structural features as recited in claims 1 to 20:

(i) the first hemispheric cup having two **identical first semi-conical engagement edges** **symmetrically outwardly projecting at two sides** thereof and two **identical first semi-conical connection edges** **inwardly projecting between the two first semi-conical engagement edges**, wherein the two first semi-conical engagement edges are **symmetrically and continuously extended** between the two

first semi-conical connection edges so as to form a continuous first joint edge for the first hemispheric cup (as claimed in claim 1);

(ii) the second hemispheric cup having two **identical second semi-conical engagement edges symmetrically outwardly projecting at two sides** thereof and two **identical second semi-conical connection edges inwardly projecting between the second first semi-conical engagement edge**, wherein the two second semi-conical engagement edges are **symmetrically and continuously extended** between the two second semi-conical connection edges so as to form a continuous second joint edge for the second hemispheric cup (as claimed in claim 1);

(iii) a **cone height** of each of the first and second semi-conical engagement edges being **equal to a cone height of each of the first and second semi-conical connection edges**, and a **size and shape of the first hemispheric cup and the second hemispheric cup are identical and symmetrical**, wherein the two second semi-conical engagement edges are **fittingly engaged** with the two first semi-conical connection edges respectively while the two second semi-conical connection edges are fittingly engaged with the two first semi-conical engagement edges respectively (as claimed in claim 1);

(iv) the **cone height** of the first and second semi-conical engagement edges and the first and second semi-conical connection edges being **equal to a radius of the first and second hemispheric cups** (as claimed in claim 2);

(v) the first and second hemispheric cups **sharing a common center point** and all the first and second semi-conical engagement edges and the first and second semi-conical connection edges are **curved and smooth edge surfaces** extended radially from the center point to a circumference of the ball cover (as claimed in claims 3 and 4);

(vi) the **continuous first joint edge of the first hemispheric cup being intercrossed with the continuous second joint edge of the second hemispheric cup** that the first and second semi-conical engagement edges are respectively engaged with the second and first semi-conical connection edges (as claimed in claims 3 and 4);

(vii) the first core body having a **first joint portion** which comprises two identical **first semi-conical engagement tongues** symmetrically projecting at two sides thereof so as to define **two identical first semi-engagement grooves symmetrically indented between the two first semi-conical engagement tongues** (as claimed in claims 5, 6 and 15);

(viii) the two **first semi-conical engagement tongues** respectively defining **two first conically curved tongue surfaces** symmetrically facing with each other, and the two **first semi-conical engagement grooves** respectively defining **two first conically curved groove surfaces** symmetrically and continuously extended **between the two first conically curved tongue surfaces**, so as to form a continuous first joint surface for the first joint portion (as claimed in claims 5, 6 and 15);

(ix) the second core body having a **second joint portion** which comprises two identical **second semi-conical engagement tongues** symmetrically projecting at two sides thereof so as to define **two identical second semi-engagement grooves symmetrically indented between the two second semi-conical engagement tongues** (as claimed in claims 5, 6 and 15);

(x) the two **second semi-conical engagement tongues** respectively defining **two second conically curved tongue surfaces** symmetrically facing with each other, and the two **second semi-conical engagement grooves** respectively defining **two second conically curved groove surfaces** symmetrically and continuously extended **between the two second conically curved tongue surfaces**, so as to form a continuous second joint surface for the second joint portion (as claimed in claims 5, 6 and 15);

(xi) a **cone height** of each of the first and second semi-conical engagement tongues being equal to a cone height of each of the first and second semi-conical engagement grooves, and thus **a size of the shape of the first joint portion and the second joint portion are identical and symmetrical**, wherein the two second semi-conical engagement tongues are fittingly engaged in the two first semi-conical engagement grooves respectively while the first semi-conical engagement tongues are fittingly engaged in the two second semi-conical engagement grooves respectively (as claimed in claims 5, 6, and 15);

(xi) the cone height of the first and second semi-conical engagement tongues and the first and second semi-conical engagement grooves being equal to a radius of the first and second joint portions (as claimed in claims 7, 8 and 16);

(xii) the first and second joint portions sharing a common center point and all the first and second conically curved tongue surface and the first and second conically curved groove surfaces of the first and second joint portions being **curved and smooth surfaces extended outwardly and radially from the center point to a circumference of the solid ball core** (as claimed in claims 9-11 and 17-18);

(xiii) the **first joint portion being intercrossed with the second joint portion** that the first and second semi-conical engagement tongues being respectively engaged in the second and first semi-conical engagement grooves, and the first and second semi-conical engagement tongues being embraced by the second and first semi-conical engagement grooves respectively (as claimed in claims 9-11 and 17-18);

(xiv) the first and second conically curved tongue surfaces and the first and second conically curved grooves of the first second joint portions being curved and smooth surfaces are **inclined from the center point at 45⁰** (as claimed in claims 12-14 and 20).

16. Applicant believes that for all of the foregoing reasons, the claims 1 to 20 are in condition for allowance and such action is respectfully requested.

The Cited but Non-Applied References

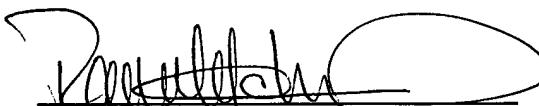
17. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

18. Since a total of 40 claims and 4 independent claims are presented, a check in an amount of US\$222.00 is submitted herewith to pay the additional filing fee for the fourth independent claim in excess of three and the additional 20 claims in excess of twenty. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 502111.

19. An information disclosure statement by applicant and the corresponding cited arts are submitted herewith to indicate the technical state of art at the time of the invention made.

20. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection and rejection are requested. Allowance of claims 1 to 40 at an early date is solicited.

Respectfully submitted,



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